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 Asn Cys Arg Gln Met Arg Asn Met Glu Met Glu Glu Lys Ala Lys Arg
 50 55 60
 Glu Phe Lys Ile Leu Lys Leu Phe Ile His Pro His Ile Ile Arg Leu
 65 70 75 80
 Tyr Glu Val Ile Tyr Thr Pro Thr Asp Ile Tyr Val Val Met Glu Tyr
 85 90 95
 Cys Lys Tyr Gly Glu Leu Phe Asp Tyr Ile Val Glu Lys Gly Arg Leu
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 Gln Glu Asp Glu Ala Arg Arg Ile Phe Gln Gln Ile Ile Ser Gly Val
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 Glu Tyr Cys His Arg Asn Met Val Val His Arg Asp Leu Lys Pro Glu
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Leu Ser Asn Val Met His Asp Gly His Phe Leu Lys Thr Ser Cys Gly
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 405 410 415
 Arg Trp Lys Lys Asn Gly His Tyr Asn Val Lys Cys Arg Trp Cys Pro
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 Gly Asp Ser Thr Ile Met Asp Asn Asp Asp Ala Asn Gly Arg Leu Pro
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 Thr Val Ile Lys Phe Glu Phe Gln Leu Tyr Lys Thr Lys Asp Asp Lys
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 50 55 60
 Pro Ala Arg Ser Val Ser Pro Ala Ala Arg Tyr Thr Met Glu Gly Ala
 65 70 75 80
 Gly Arg Asp Ala Asn Pro Leu Ser Gly Tyr Arg Ile Gly Lys Thr Leu
 85 90 95
 Gly Ile Gly Ser Phe Gly Lys Val Lys Ile Ala Glu His Ile Leu Thr
 100 105 110
 Gly His Lys Val Ala Ile Lys Ile Leu Asn Arg Lys Lys Ile Arg Ser
 115 120 125
 Met Asp Met Glu Glu Lys Val Lys Arg Glu Ile Lys Ile Leu Arg Leu
 130 135 140
 Phe Met His Pro His Ile Ile Arg Leu Tyr Glu Val Ile Asp Thr Pro
 145 150 155 160
 Ala Asp Ile Cys Val Val Met Glu Tyr Val Lys Ser Gly Glu Leu Phe
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 Asp Tyr Ile Val Glu Lys Gly Arg Leu His Glu Glu Glu Ala Arg His
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 Phe Phe Gln Gln Ile Ile Ser Gly Val Glu Tyr Cys His Arg Asn Met
 195 200 205
 Val Ala His Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu Asp Ser Lys
 210 215 220
 Cys Asn Val Lys Ile Ala Asp Phe Gly Leu Ser Asn Ile Met Arg Asp
 225 230 235 240
 Gly His Phe Leu Lys Thr Ser Cys Gly Ser Pro Asn Tyr Ala Ala Pro
 245 250 255
 Glu Val Ile Ser Gly Lys Leu Tyr Ala Gly Pro Glu Val Asp Val Trp
 260 265 270
 Ser Cys Gly Val Ile Leu Tyr Ala Leu Leu Cys Gly Thr Leu Pro Phe
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 Asp Asp Glu Asn Ile Pro Asn Leu Phe Lys Lys Ile Lys Gly Gly Ile
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Pro Pro Pro Asp Thr Ala Gln Gln Val Lys Lys Val Asp Glu Glu Thr
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 Pro Thr Ser Ala Thr Glu Leu Arg Gln His Gly Phe Ser Glu Ser Pro
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 Gly Ser Gly Leu Arg Gln His Phe Ala Ala Glu Arg Lys Trp Ala Leu
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 Gly Leu Gln Ser Arg Ala His Pro Arg Glu Ile Ile Ser Glu Val Leu
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 Lys Ala Leu Gln Glu Leu Asn Val Tyr Trp Lys Lys Ile Gly His Tyr
 485 490 495
 Asn Met Lys Cys Arg Trp Ser Pro Gly Cys Leu Glu Ser Met Met His
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<210> 10
 <211> 422
 <212> PRT
 <213> Glycine max

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 His Ala Arg Asn Leu Lys Thr Gly Gln His Val Ala Met Lys Val Val
 35 40 45
 Gly Lys Glu Lys Val Ile Lys Val Gly Met Met Glu Gln Val Lys Arg
 50 55 60
 Glu Ile Ser Val Met Lys Met Val Lys His Pro Asn Ile Val Glu Leu
 65 70 75 80
 His Glu Val Met Ala Ser Lys Ser Lys Ile Tyr Ile Ser Ile Glu Leu
 85 90 95
 Val Arg Gly Gly Glu Leu Phe Asn Lys Val Ser Lys Gly Arg Leu Lys
 100 105 110
 Glu Asp Leu Ala Arg Leu Tyr Phe Gln Gln Leu Ile Ser Ala Val Asp
 115 120 125

Phe Cys His Ser Arg Gly Val Tyr His Arg Asp Leu Lys Pro Glu Asn
130 135 140
Leu Leu Leu Asp Glu His Gly Asn Leu Lys Val Ser Asp Phe Gly Leu
145 150 155 160
Thr Ala Phe Ser Asp His Leu Lys Glu Asp Gly Leu Leu His Thr Thr
165 170 175
Cys Gly Thr Pro Ala Tyr Val Ser Pro Glu Val Ile Ala Lys Lys Gly
180 185 190
Tyr Asp Gly Ala Lys Ala Asp Ile Trp Ser Cys Gly Val Ile Leu Tyr
195 200 205
Val Leu Leu Ala Gly Phe Leu Pro Phe Gln Asp Asp Asn Leu Val Ala
210 215 220
Met Tyr Lys Lys Ile His Arg Gly Asp Phe Lys Cys Pro Pro Trp Phe
225 230 235 240
Ser Leu Asp Ala Arg Lys Leu Val Thr Lys Leu Leu Asp Pro Asn Pro
245 250 255
Asn Thr Arg Ile Ser Ile Ser Lys Val Met Glu Ser Ser Trp Phe Lys
260 265 270
Lys Gln Val Pro Arg Lys Val Glu Glu Val Val Glu Lys Val Asp Leu
275 280 285
Glu Glu Lys Ile Glu Asn Gln Glu Thr Met Asn Ala Phe His Ile Ile
290 295 300
Ser Leu Ser Glu Gly Phe Asn Leu Ser Pro Leu Phe Glu Glu Lys Arg
305 310 315 320
Lys Glu Glu Met Arg Phe Ala Thr Ala Gly Thr Pro Ser Ser Val Ile
325 330 335
Ser Arg Leu Glu Glu Val Ala Lys Ala Gly Lys Phe Asp Val Lys Ser
340 345 350
Ser Glu Thr Lys Val Arg Leu Gln Gly Gln Glu Arg Gly Arg Lys Gly
355 360 365
Lys Leu Ala Ile Ala Ala Asp Ile Tyr Ala Val Thr Pro Ser Phe Met
370 375 380
Val Val Glu Val Lys Lys Asp Asn Gly Asp Thr Leu Glu Tyr Asn Gln
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Phe Cys Ser Lys Gln Leu Arg Pro Ala Leu Lys Asp Ile Phe Trp Asn
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Ser Ala Pro Ala Ser Ala
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<210> 11
<211> 2123

<212> DNA
<213> Glycine max

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<210> 12
<211> 514
<212> PRT
<213> Glycine max

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Pro Asn Tyr Lys Leu Gly Lys Thr Leu Gly Ile Gly Ser Phe Gly Lys
20 25 30

Val Lys Ile Ala Glu His Val Leu Thr Gly His Lys Val Ala Ile Lys
35 40 45

Ile Leu Asn Arg Arg Lys Ile Lys Asn Met Glu Met Glu Glu Lys Val
50 55 60

Arg Arg Glu Ile Lys Ile Leu Arg Leu Phe Met His Pro His Ile Ile

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65	70	75	80
Arg Leu Tyr Glu Val Ile Glu Thr Pro Thr Asp Ile Tyr Val Val Met	85	90	95
Glu Tyr Val Lys Ser Gly Glu Leu Phe Asp Tyr Ile Val Glu Lys Gly	100	105	110
Arg Leu Gln Glu Asp Glu Ala Arg Asn Phe Phe Gln Gln Ile Ile Ser	115	120	125
Gly Val Glu Tyr Cys His Arg Asn Met Val Val His Arg Asp Leu Lys	130	135	140
Pro Glu Asn Leu Leu Leu Asp Ser Lys Cys Asn Val Lys Ile Ala Asp	145	150	155
Phe Gly Leu Ser Asn Ile Met Arg Asp Gly His Phe Leu Lys Thr Ser	165	170	175
Cys Gly Ser Pro Asn Tyr Ala Ala Pro Glu Val Ile Ser Gly Lys Leu	180	185	190
Tyr Ala Gly Pro Glu Val Asp Val Trp Ser Cys Gly Val Ile Leu Tyr	195	200	205
Ala Leu Leu Cys Gly Thr Leu Pro Phe Asp Asp Glu Asn Ile Pro Asn	210	215	220
Leu Phe Lys Lys Ile Lys Gly Gly Ile Tyr Thr Leu Pro Ser His Leu	225	230	235
Ser Pro Gly Ala Arg Asp Leu Ile Pro Gly Met Leu Val Val Asp Pro	245	250	255
Met Arg Arg Met Thr Ile Pro Glu Ile Arg Gln His Pro Trp Phe Gln	260	265	270
Ala Arg Leu Pro Arg Tyr Leu Ala Val Pro Pro Pro Asp Thr Met Gln	275	280	285
Gln Ala Lys Lys Ile Asp Glu Glu Ile Leu Gln Glu Val Val Lys Met	290	295	300
Gly Phe Asp Arg Asn Gln Leu Val Glu Ser Leu Gly Asn Arg Ile Gln	305	310	315
Asn Glu Gly Thr Val Ala Tyr Tyr Leu Leu Leu Asp Asn Arg Phe Arg	325	330	335
Val Ser Ser Gly Tyr Leu Gly Ala Glu Phe Gln Glu Thr Met Asp Ser	340	345	350
Gly Phe Asn Gln Met His Ser Ser Glu Leu Ala Ser Ser Val Val Gly	355	360	365
Asn Arg Phe Pro Gly Tyr Met Glu Tyr Pro Gly Val Gly Ser Arg Gln	370	375	380
Gln Phe Pro Val Glu Arg Lys Trp Ala Leu Gly Leu Gln Ser Arg Ala			

385		390		395		400
His Pro Arg Glu Ile Met Thr Glu Val Leu Lys Ala Leu Gln Glu Leu						
	405			410		415
Asn Val Cys Trp Lys Lys Ile Gly His Tyr Asn Met Lys Cys Arg Trp						
	420			425		430
Val Ala Gly Ile Pro Gly His His Glu Gly Met Val Asn Asn Asn Val						
	435			440		445
His Ser Asn His Tyr Phe Gly Asp Asp Ser Asn Ile Ile Glu Asn Asp						
	450			455		460
Ala Val Ser Thr Ser Asn Val Val Lys Phe Glu Val Gln Leu Tyr Lys						
	465			470		475
Thr Arg Glu Glu Lys Tyr Leu Leu Asp Leu Gln Arg Val Gln Gly Pro						
	485			490		495
Gln Phe Leu Phe Leu Asp Leu Cys Ala Ala Phe Leu Ala Gln Leu Arg						
	500			505		510

Val Leu

<210> 13
 <211> 2040
 <212> DNA
 <213> Glycine max

<400> 13

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aacaattaga aagtagtaga gtgttttttt ttcttttttt cgtttgtttt acttttaaga	360
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<210> 14
<211> 438
<212> PRT
<213> Glycine max

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Leu His Gly Lys Tyr Glu Leu Gly Arg Leu Leu Gly His Gly Thr Phe
              20              25              30

Ala Lys Val Tyr His Ala Arg His Leu Lys Thr Gly Lys Ser Val Ala
              35              40              45

Met Lys Val Val Gly Lys Glu Lys Val Val Lys Val Gly Met Met Glu
  50              55              60

Gln Ile Lys Arg Glu Ile Ser Ala Met Asn Met Val Lys His Pro Asn
  65              70              75              80

Ile Val Gln Leu His Glu Val Met Ala Ser Lys Ser Lys Ile Tyr Ile
              85              90              95

Ala Met Glu Leu Val Arg Gly Gly Glu Leu Phe Asn Lys Ile Ala Arg
              100              105              110

Gly Arg Leu Arg Glu Glu Met Ala Arg Leu Tyr Phe Gln Gln Leu Ile
              115              120              125

Ser Ala Val Asp Phe Cys His Ser Arg Gly Val Tyr His Arg Asp Leu
              130              135              140

Lys Pro Glu Asn Leu Leu Leu Asp Asp Asp Gly Asn Leu Lys Val Thr
              145              150              155              160

Asp Phe Gly Leu Ser Thr Phe Ser Glu His Leu Arg His Asp Gly Leu
              165              170              175

Leu His Thr Thr Cys Gly Thr Pro Ala Tyr Val Ala Pro Glu Val Ile
              180              185              190

Gly Lys Arg Gly Tyr Asp Gly Ala Lys Ala Asp Ile Trp Ser Cys Gly
              195              200              205

Val Ile Leu Tyr Val Leu Leu Ala Gly Phe Leu Pro Phe Gln Asp Asp
              210              215              220

Asn Leu Val Ala Leu Tyr Lys Lys Ile Tyr Arg Gly Asp Phe Lys Cys
              225              230              235              240

Pro Pro Trp Phe Ser Ser Glu Ala Arg Arg Leu Ile Thr Lys Leu Leu
              245              250              255

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Asp Pro Asn Pro Asn Thr Arg Ile Thr Ile Ser Lys Ile Met Asp Ser
 260 265 270
 Ser Trp Phe Lys Lys Pro Val Pro Lys Asn Leu Met Gly Lys Lys Arg
 275 280 285
 Glu Glu Leu Asp Leu Glu Glu Lys Ile Lys Gln His Glu Gln Glu Val
 290 295 300
 Ser Thr Thr Met Asn Ala Phe His Ile Ile Ser Leu Ser Glu Gly Phe
 305 310 315 320
 Asp Leu Ser Pro Leu Phe Glu Glu Lys Lys Arg Glu Glu Lys Glu Leu
 325 330 335
 Arg Phe Ala Thr Thr Arg Pro Ala Ser Ser Val Ile Ser Arg Leu Glu
 340 345 350
 Asp Leu Ala Lys Ala Val Lys Phe Asp Val Lys Lys Ser Glu Thr Lys
 355 360 365
 Val Arg Leu Gln Gly Gln Glu Lys Gly Arg Lys Gly Lys Leu Ala Ile
 370 375 380
 Ala Ala Asp Leu Tyr Ala Val Thr Pro Ser Phe Leu Val Val Glu Val
 385 390 395 400
 Lys Lys Asp Asn Gly Asp Thr Leu Glu Tyr Asn Gln Phe Cys Ser Lys
 405 410 415
 Glu Leu Arg Pro Ala Leu Lys Asp Ile Val Trp Arg Thr Ser Pro Ala
 420 425 430
 Glu Asn Pro Thr Leu Ala
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<210> 15
 <211> 2543
 <212> DNA
 <213> Glycine max

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 aaaaacatgg aaatggaaga aaaagttaga agagaaatca aaattttaag attgtttatg 300
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 <211> 515
 <212> PRT
 <213> Glycine max

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 35 40 45
 Lys Ile Leu Asn Arg His Lys Ile Lys Asn Met Glu Met Glu Glu Lys
 50 55 60
 Val Arg Arg Glu Ile Lys Ile Leu Arg Leu Phe Met His His His Ile
 65 70 75 80
 Ile Arg Leu Tyr Glu Val Val Glu Thr Pro Thr Asp Ile Tyr Val Val
 85 90 95
 Met Glu Tyr Val Lys Ser Gly Glu Leu Phe Asp Tyr Ile Val Glu Lys
 100 105 110
 Gly Arg Leu Gln Glu Asp Glu Ala Arg His Phe Phe Gln Gln Ile Ile
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 Ser Gly Val Glu Tyr Cys His Arg Asn Met Val Val His Arg Asp Leu
 130 135 140

Lys Pro Glu Asn Leu Leu Leu Asp Ser Lys Phe Asn Ile Lys Ile Ala
145 150 155 160
Asp Phe Gly Leu Ser Asn Ile Met Arg Asp Gly His Phe Leu Lys Thr
165 170 175
Ser Cys Gly Ser Pro Asn Tyr Ala Ala Pro Glu Val Ile Ser Gly Lys
180 185 190
Leu Tyr Ala Gly Pro Glu Val Asp Val Trp Ser Cys Gly Val Ile Leu
195 200 205
Tyr Ala Leu Leu Cys Gly Thr Leu Pro Phe Asp Asp Glu Asn Ile Pro
210 215 220
Asn Leu Phe Lys Lys Ile Lys Gly Gly Ile Tyr Thr Leu Pro Ser His
225 230 235 240
Leu Ser Pro Gly Ala Arg Asp Leu Ile Pro Arg Met Leu Val Val Asp
245 250 255
Pro Met Lys Arg Met Thr Ile Pro Glu Ile Arg Gln His Pro Trp Phe
260 265 270
Gln Val His Leu Pro Arg Tyr Leu Ala Val Pro Pro Pro Asp Thr Leu
275 280 285
Gln Gln Ala Lys Lys Ile Asp Glu Glu Ile Leu Gln Glu Val Val Asn
290 295 300
Met Gly Phe Asp Arg Asn Gln Leu Val Glu Ser Leu Ser Asn Arg Ile
305 310 315 320
Gln Asn Glu Gly Thr Val Thr Tyr Tyr Leu Leu Leu Asp Asn Arg Phe
325 330 335
Arg Val Ser Ser Gly Tyr Leu Gly Ala Glu Phe Gln Glu Thr Met Asp
340 345 350
Ser Gly Phe Asn Arg Met His Ser Gly Glu Val Ala Ser Pro Val Val
355 360 365
Gly His His Ser Thr Gly Tyr Met Asp Tyr Gln Gly Val Gly Met Arg
370 375 380
Gln Gln Phe Pro Val Glu Arg Lys Trp Ala Leu Gly Leu Gln Ser Arg
385 390 395 400
Ala Gln Pro Arg Glu Ile Met Thr Glu Val Leu Lys Ala Leu Gln Glu
405 410 415
Leu Asn Val Cys Trp Lys Lys Ile Gly His Tyr Asn Met Lys Cys Arg
420 425 430
Trp Val Ala Gly Thr Ala Gly His His Glu Gly Met Ile Asn Asn Ser
435 440 445
Leu His Ser Asn His Tyr Phe Gly Asn Asp Ser Gly Ile Ile Glu Asn
450 455 460

Glu Ala Val Ser Lys Ser Asn Val Val Lys Phe Glu Val Gln Leu Tyr
465 470 475 480

Lys Thr Arg Glu Glu Lys Tyr Leu Leu Asp Leu Gln Arg Val Gln Gly
485 490 495

Pro Gln Phe Leu Phe Leu Asp Leu Cys Ala Ala Phe Leu Ser Gln Leu
500 505 510

Arg Val Leu
515

<210> 17
<211> 1869
<212> DNA
<213> Glycine max

<400> 17
gcacgaggtc tgggtgcata gcattgggtg gtagttgtct caaaaatctc ttcttgcctt 60
ttggccataa tcaaaagcca agacactgtt catacagctg ctcaattatc aagccaacct 120
tgctcggttc cactgcagaa ttccagttaa ttcttatcta gctcaattct ggttgtgggt 180
ttatctctta ctggaagaca gactttgagg tagactcctt ataatgtcgc agaagttcaa 240
gtgtagagaa tgagtcagcc taagattaaa cgccgagttg gtaaatacga ggtggggagg 300
accattgggtg aaggtacatt tgcaaagggtg aaatttgcaa ggaactctga gacaggagag 360
cccggtgctc ttaaaattct tgacaaggag aagggtgctaa agcacaagat ggctgagcag 420
atcaggagag aagtagctac aatgaaacta atcaagcatc caaatgttgt tcgattgtat 480
gaggtcatgg gaagcaagac caaaatatat attgttttgg agtttgtaac tgggggggaa 540
ctctttgaca aaattgtaaa ccatggaagg atgagtgaat atgaagcacg tagatatttc 600
cagcagctta taaatgctgt tgattattgc catagcaggg gtgtctacca cagagacctg 660
aagccagaaa atttgctatt agatacttat gggaacctta aagtttctga ttttggtttg 720
agtgcctctc ccagcaagt tagggatgat ggacttcttc atactacatg tggcactcca 780
aattatgttg ctctgaggt ccttaacgat agaggctatg atggggcaac tgcagacttg 840
tgggtcatgtg gggttattct ctttgatttg gttgcagggt actgccttt cgacgacctt 900
aatcttatga acctgtataa aaagatctca gctgctgaat ttacttgccc cccatggctt 960
tctttcactg ccaggaaatt gattacacga atcttgatc cagatccac cactcgtatc 1020
actatacctg agattttgga tgatgaatgg tttaagaaag aatataagcc tccattttt 1080
gaggagaatg gggaaatcaa cctcgatgat gttgaagctg tctttaaaga ctctgaagag 1140
caccatgtga cagagaaaaa agaagagcag cctacagcca tgaatgcatt tgagttaatc 1200
tccatgtcca aaggactgaa ccttgaaaac ttgtttgata ctgagcaggg atttaaaagg 1260
gaaacaagat tcacctcaaa atcccctgcg gatgagataa tcaacaagat tgaggaagcc 1320
gcaaaacctc ttggctttga tgtgcagaag aaaaattaca agatgaggct tgcaaatgtg 1380
aaagctggaa ggaagggaag ccttaatgtt gccacagaga tatttcaagt ggcaccttct 1440
cttcacatgg tagaggtacg gaaggcaaaa ggagatacat tggagttcca taagttctac 1500
aagaaaacttt caacaagcct ggatgatgtt gtttggaata cagaagatga tatgcaaatg 1560
cgagaaacaa agtgatgtgg atattattat cattgtctat taagtgtaat tttcttctg 1620
tctgaggttt tactattttc caatttcttc attogttata ttctccccc gtaggtttgt 1680
ttggacatta attacatagt actcatttat tgcataccat gctattattt tttgaaagca 1740
tgagaggttc atgtaagaat ttactcatc caacagtcgc gggtatgttc atgaaacaaa 1800
aaattgtaag aaatttgtat attgtatata tctatctatt tatatctttt caaaaaaaaaa 1860
aaaaaaaaa 1869

<210> 18
<211> 441
<212> PRT
<213> Glycine max

<400> 18
Met Ser Gln Pro Lys Ile Lys Arg Arg Val Gly Lys Tyr Glu Val Gly
1 5 10 15

Arg	Thr	Ile	Gly	Glu	Gly	Thr	Phe	Ala	Lys	Val	Lys	Phe	Ala	Arg	Asn	
			20					25					30			
Ser	Glu	Thr	Gly	Glu	Pro	Val	Ala	Leu	Lys	Ile	Leu	Asp	Lys	Glu	Lys	
		35					40					45				
Val	Leu	Lys	His	Lys	Met	Ala	Glu	Gln	Ile	Arg	Arg	Glu	Val	Ala	Thr	
	50					55					60					
Met	Lys	Leu	Ile	Lys	His	Pro	Asn	Val	Val	Arg	Leu	Tyr	Glu	Val	Met	
65					70					75					80	
Gly	Ser	Lys	Thr	Lys	Ile	Tyr	Ile	Val	Leu	Glu	Phe	Val	Thr	Gly	Gly	
				85					90					95		
Glu	Leu	Phe	Asp	Lys	Ile	Val	Asn	His	Gly	Arg	Met	Ser	Glu	Asn	Glu	
			100					105					110			
Ala	Arg	Arg	Tyr	Phe	Gln	Gln	Leu	Ile	Asn	Ala	Val	Asp	Tyr	Cys	His	
		115					120					125				
Ser	Arg	Gly	Val	Tyr	His	Arg	Asp	Leu	Lys	Pro	Glu	Asn	Leu	Leu	Leu	
	130					135					140					
Asp	Thr	Tyr	Gly	Asn	Leu	Lys	Val	Ser	Asp	Phe	Gly	Leu	Ser	Ala	Leu	
145					150					155					160	
Ser	Gln	Gln	Val	Arg	Asp	Asp	Gly	Leu	Leu	His	Thr	Thr	Cys	Gly	Thr	
				165					170					175		
Pro	Asn	Tyr	Val	Ala	Pro	Glu	Val	Leu	Asn	Asp	Arg	Gly	Tyr	Asp	Gly	
			180					185					190			
Ala	Thr	Ala	Asp	Leu	Trp	Ser	Cys	Gly	Val	Ile	Leu	Phe	Val	Leu	Val	
		195					200					205				
Ala	Gly	Tyr	Leu	Pro	Phe	Asp	Asp	Pro	Asn	Leu	Met	Asn	Leu	Tyr	Lys	
	210					215					220					
Lys	Ile	Ser	Ala	Ala	Glu	Phe	Thr	Cys	Pro	Pro	Trp	Leu	Ser	Phe	Thr	
225					230					235					240	
Ala	Arg	Lys	Leu	Ile	Thr	Arg	Ile	Leu	Asp	Pro	Asp	Pro	Thr	Thr	Arg	
				245					250					255		
Ile	Thr	Ile	Pro	Glu	Ile	Leu	Asp	Asp	Glu	Trp	Phe	Lys	Lys	Glu	Tyr	
			260					265					270			
Lys	Pro	Pro	Ile	Phe	Glu	Glu	Asn	Gly	Glu	Ile	Asn	Leu	Asp	Asp	Val	
		275					280					285				
Glu	Ala	Val	Phe	Lys	Asp	Ser	Glu	Glu	His	His	Val	Thr	Glu	Lys	Lys	
	290					295					300					
Glu	Glu	Gln	Pro	Thr	Ala	Met	Asn	Ala	Phe	Glu	Leu	Ile	Ser	Met	Ser	
305					310					315					320	
Lys	Gly	Leu	Asn	Leu	Glu	Asn	Leu	Phe	Asp	Thr	Glu	Gln	Gly	Phe	Lys	
				325					330					335		

Arg Glu Thr Arg Phe Thr Ser Lys Ser Pro Ala Asp Glu Ile Ile Asn
340 345 350

Lys Ile Glu Glu Ala Ala Lys Pro Leu Gly Phe Asp Val Gln Lys Lys
355 360 365

Asn Tyr Lys Met Arg Leu Ala Asn Val Lys Ala Gly Arg Lys Gly Asn
370 375 380

Leu Asn Val Ala Thr Glu Ile Phe Gln Val Ala Pro Ser Leu His Met
385 390 395 400

Val Glu Val Arg Lys Ala Lys Gly Asp Thr Leu Glu Phe His Lys Phe
405 410 415

Tyr Lys Lys Leu Ser Thr Ser Leu Asp Asp Val Val Trp Lys Thr Glu
420 425 430

Asp Asp Met Gln Met Arg Glu Thr Lys
435 440

<210> 19
<211> 817
<212> DNA
<213> Triticum aestivum

<400> 19
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tggaagggaa cactagagga ggtgggcatt ctgacgcatt aaagaactac aatgtgggca 120
gaacattagg tataggcaca ttggaaaag tgaggattgc agagcataag catacagggc 180
ataaagttgc tataaagatt ctgaaccgtc gtcaaattgag aactatggaa atggaggaga 240
aagcaaagag agagatcaag atattgaggt tgttcattcca cctcatatc atccggcttt 300
atgaggtcat ttacacacct acagatatat ttgttgatg ggaatattgc aagtatgggtg 360
agctattcga ctgcattgtt gagaaagggc gggtacagga agatgaggct cgtcgaatct 420
tccagcagat tatatctggt gttgaatact gccacagaaa catggttgct catcgtgatc 480
taaagccaga gaacctgtta cttgattcca aatacaatgt gaaacttgcc gactttgggt 540
taagtaatgt catgcatgat ggccattttc tgaagactag ctgcgggagt ccaaactatg 600
ctgcaccaga ggttatctca ggtaaattat acgctggacc tgagggtgat gtttgagact 660
gcggggtgat actttatgct cttctttgtg gcactcttcc atttgatgat gacaatattc 720
ccaaactgtt caaaaagata aagggaggga tctatatacct tccaagtcatt ttatctgctc 780
ctgcaaggga ttgatccaag aatgcttggt gttgatc 817

<210> 20
<211> 244
<212> PRT
<213> Triticum aestivum

<400> 20
Met Glu Gly Asn Thr Arg Gly Gly Gly His Ser Asp Ala Leu Lys Asn
1 5 10 15

Tyr Asn Val Gly Arg Thr Leu Gly Ile Gly Thr Phe Gly Lys Val Arg
20 25 30

Ile Ala Glu His Lys His Thr Gly His Lys Val Ala Ile Lys Ile Leu
35 40 45

Asn Arg Arg Gln Met Arg Thr Met Glu Met Glu Glu Lys Ala Lys Arg
50 55 60

Glu Ile Lys Ile Leu Arg Leu Phe Ile His Pro His Ile Ile Arg Leu
 65 70 75 80
 Tyr Glu Val Ile Tyr Thr Pro Thr Asp Ile Phe Val Val Met Glu Tyr
 85 90 95
 Cys Lys Tyr Gly Glu Leu Phe Asp Cys Ile Val Glu Lys Gly Arg Leu
 100 105 110
 Gln Glu Asp Glu Ala Arg Arg Ile Phe Gln Gln Ile Ile Ser Gly Val
 115 120 125
 Glu Tyr Cys His Arg Asn Met Val Ala His Arg Asp Leu Lys Pro Glu
 130 135 140
 Asn Leu Leu Leu Asp Ser Lys Tyr Asn Val Lys Leu Ala Asp Phe Gly
 145 150 155 160
 Leu Ser Asn Val Met His Asp Gly His Phe Leu Lys Thr Ser Cys Gly
 165 170 175
 Ser Pro Asn Tyr Ala Ala Pro Glu Val Ile Ser Gly Lys Leu Tyr Ala
 180 185 190
 Gly Pro Glu Val Asp Val Trp Ser Cys Gly Val Ile Leu Tyr Ala Leu
 195 200 205
 Leu Cys Gly Thr Leu Pro Phe Asp Asp Asp Asn Ile Pro Lys Leu Phe
 210 215 220
 Lys Lys Ile Lys Gly Gly Ile Tyr Ile Leu Pro Ser His Leu Ser Ala
 225 230 235 240
 Pro Ala Arg Asp

<210> 21
 <211> 2006
 <212> DNA
 <213> *Triticum aestivum*

<400> 21
 ctccgcgccg ccgctgccgc tacgcctctc cccgggaagc ctccgccggcg gccagggtgga 60
 agatggagac aggcggcaaa gatggcaacc ctttgaagaa ttaccgtatt gggaagaccc 120
 tggggattgg ttcgttcggg aaggtcaaga ttgccgagca tataaaaaact ggtcacaaagg 180
 tggccgtcaa gatccttaac cgccggaaaa tcaaaaacat ggagatggaa gagaaagtga 240
 aaagagagat caagatatta agattattca tgcacccaca tatcatccgc ctttatgaag 300
 tgatagaggc accagctgat atttatgtgg ttatggagta tgtaaagtct ggtgaattgt 360
 ttgattacat tgttgagaaa ggtaggctac aggaggaaga ggcccgccgt ttctttcaac 420
 agatcatatc tgggtgttcaa tattgccaca ggaacatggg ggtgcaccgc gatctaaagc 480
 cggagaacct tcttttggac aataattgtg atgttaagat tgcggatttt ggcttaagta 540
 atgttatgcy tgacggccac tttcttaaga caagttgtgg tagcccaa at tatgcagctc 600
 cggaggttat atctggaaaa ctgtacgctg ggcctgaagt tgatgtatgg agctgcggtg 660
 ttattcttta tgctcttcta tgtggtactc ttccatttga tgatgagaac ataccacaacc 720
 tttttaagaa aataaagggt ggaatatata cccttccaag ccatttatca ggcccagcaa 780
 gggatttgat tccaaggatg ctagtgtgtg atcctatgaa gaggataacc attcgtgaaa 840
 tacgcgagca tccatggttt gaagctcaac tcccacgata tttagccgtg cctccaccag 900
 atactgcaca acaagttaaa aagattgatg aagaatctct tgtaaagtt atcagtcctg 960
 gatttgacaa aaacctgctg gttgaatcaa ttcataatag attgcaaat gaggcaacag 1020
 ttgcatatta tttgtttttg gataataaga gtcgcacaac aactggctat cttggagctg 1080

ggtatcaaga agctatggaa tcgtctttct caccattac tccaagtga acacaaagtc 1140
 cagctcatgg aaatcggcaa caaccatata tggaatctcc agttggcttg agaccacatt 1200
 ttccagctga taggaaatgg gctcttgggc ttcagtctcg agcacatcca agagaagtta 1260
 tgactgaagt gctgaaggct ctgcaagaac tgaatgtata ctggaaaaaa attggacact 1320
 ataacatgaa atgtagatgg agtcctcctg gctttcccgg tcaggagaat atgaatcata 1380
 ccaattataa cttcagtgca gagcctattg aaaccgacga cctgggtgac aagttaaatt 1440
 taattaagtt cgaacttcag ctttacaaaa caagagatga gaaatacctt ctggatttgc 1500
 aaaggcgag cgggcccgc ctcctctttc ttgatctatg tgccgccttt ctagctcagc 1560
 tgagagtctt ttgataccag atgtgccgga ggaatgtatg ttgtatcact ctaaagagat 1620
 gtaaatagca agctttctcc agcggatcaa agtcgtggag tatgtagaca tgcggagctg 1680
 ttgtgtgctt atttcggcgc ctatatgctg aatttagacc tggcaggggc gggcaagtga 1740
 agcaagcaag gaactattgc catcaggtta tttccagctg ccgccaaagg cactaggata 1800
 tagaagtatt actgattaat cctatatggg ccccttggga catactccta ctctactgct 1860
 gtttacttgc atgtaatttt tactgtctgg gtctccagac cagaccacgt acacgaataa 1920
 tttcttcaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980
 aaaaaaaaaa aaaaaaaaaa aaaaaa 2006

<210> 22
 <211> 523
 <212> PRT
 <213> Triticum aestivum

<400> 22
 Pro Arg Arg Arg Cys Arg Tyr Ala Ser Pro Arg Glu Ala Ser Pro Ala
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 Ala Arg Trp Lys Met Glu Thr Gly Gly Lys Asp Gly Asn Pro Leu Lys
 20 25 30
 Asn Tyr Arg Ile Gly Lys Thr Leu Gly Ile Gly Ser Phe Gly Lys Val
 35 40 45
 Lys Ile Ala Glu His Ile Lys Thr Gly His Lys Val Ala Val Lys Ile
 50 55 60
 Leu Asn Arg Arg Lys Ile Lys Asn Met Glu Met Glu Glu Lys Val Lys
 65 70 75 80
 Arg Glu Ile Lys Ile Leu Arg Leu Phe Met His Pro His Ile Ile Arg
 85 90 95
 Leu Tyr Glu Val Ile Glu Ala Pro Ala Asp Ile Tyr Val Val Met Glu
 100 105 110
 Tyr Val Lys Ser Gly Glu Leu Phe Asp Tyr Ile Val Glu Lys Gly Arg
 115 120 125
 Leu Gln Glu Glu Glu Ala Arg Arg Phe Phe Gln Gln Ile Ile Ser Gly
 130 135 140
 Val Gln Tyr Cys His Arg Asn Met Val Val His Arg Asp Leu Lys Pro
 145 150 155 160
 Glu Asn Leu Leu Leu Asp Asn Asn Cys Asp Val Lys Ile Ala Asp Phe
 165 170 175
 Gly Leu Ser Asn Val Met Arg Asp Gly His Phe Leu Lys Thr Ser Cys
 180 185 190
 Gly Ser Pro Asn Tyr Ala Ala Pro Glu Val Ile Ser Gly Lys Leu Tyr

195	200	205
Ala Gly Pro Glu Val Asp Val Trp Ser Cys Gly Val Ile Leu Tyr Ala 210 215 220		
Leu Leu Cys Gly Thr Leu Pro Phe Asp Asp Glu Asn Ile Pro Asn Leu 225 230 235 240		
Phe Lys Lys Ile Lys Gly Gly Ile Tyr Thr Leu Pro Ser His Leu Ser 245 250 255		
Gly Pro Ala Arg Asp Leu Ile Pro Arg Met Leu Val Val Asp Pro Met 260 265 270		
Lys Arg Ile Thr Ile Arg Glu Ile Arg Glu His Pro Trp Phe Glu Ala 275 280 285		
Gln Leu Pro Arg Tyr Leu Ala Val Pro Pro Pro Asp Thr Ala Gln Gln 290 295 300		
Val Lys Lys Ile Asp Glu Glu Ser Leu Val Lys Val Ile Ser Leu Gly 305 310 315 320		
Phe Asp Lys Asn Leu Leu Val Glu Ser Ile His Asn Arg Leu Gln Asn 325 330 335		
Glu Ala Thr Val Ala Tyr Tyr Leu Phe Leu Asp Asn Lys Ser Arg Thr 340 345 350		
Thr Thr Gly Tyr Leu Gly Ala Gly Tyr Gln Glu Ala Met Glu Ser Ser 355 360 365		
Phe Ser Pro Ile Thr Pro Ser Glu Thr Gln Ser Pro Ala His Gly Asn 370 375 380		
Arg Gln Gln Pro Tyr Met Glu Ser Pro Val Gly Leu Arg Pro His Phe 385 390 395 400		
Pro Ala Asp Arg Lys Trp Ala Leu Gly Leu Gln Ser Arg Ala His Pro 405 410 415		
Arg Glu Val Met Thr Glu Val Leu Lys Ala Leu Gln Glu Leu Asn Val 420 425 430		
Tyr Trp Lys Lys Ile Gly His Tyr Asn Met Lys Cys Arg Trp Ser Pro 435 440 445		
Pro Gly Phe Pro Gly Gln Glu Asn Met Asn His Thr Asn Tyr Asn Phe 450 455 460		
Ser Ala Glu Pro Ile Glu Thr Asp Asp Leu Gly Asp Lys Leu Asn Leu 465 470 475 480		
Ile Lys Phe Glu Leu Gln Leu Tyr Lys Thr Arg Asp Glu Lys Tyr Leu 485 490 495		
Leu Asp Leu Gln Arg Ala Ser Gly Pro His Leu Leu Phe Leu Asp Leu 500 505 510		
Cys Ala Ala Phe Leu Ala Gln Leu Arg Val Phe		

515

520

<210> 23
 <211> 512
 <212> DNA
 <213> Zea mays

<400> 23
 gagcagctcc cctgccccctc gcagcggcta ctctacaggt ctagcgactc tttcgccatc 60
 catagagggg ggaggcgcgg cggagatggt gggcggtggc ggcggcgggc cgctgcggcg 120
 ggtgggcaag tacgaggtgg gacgcacccat cggggaaggc accttcgcca aggtcaaagt 180
 cgcgcagaac accgagaccg gggagagcgt cgccatgaag gtgctcgacc gctcctccat 240
 cctcaagaac aagatggccg aacagattaa gagagaaata tccataatga agcttgtcag 300
 gcatcccaat gtcgttaggc tacacgaggt tttggcaagc cggaagaaga tatttataat 360
 tctggagttc atcactggcg gcgagctatt cgataaaatt attcgtcatg ggagactcag 420
 tgaagcagat gccgcgagat actttcagca gcttattgat ggtgttgatt tttgtcacia 480
 gaaaggagtc taccatcgag acttaaagcc tg 512

<210> 24
 <211> 132
 <212> PRT
 <213> Zea mays

<400> 24
 Arg Arg Val Gly Lys Tyr Glu Val Gly Arg Thr Ile Gly Glu Gly Thr
 1 5 10 15
 Phe Ala Lys Val Lys Phe Ala Gln Asn Thr Glu Thr Gly Glu Ser Val
 20 25 30
 Ala Met Lys Val Leu Asp Arg Ser Ser Ile Leu Lys Asn Lys Met Ala
 35 40 45
 Glu Gln Ile Lys Arg Glu Ile Ser Ile Met Lys Leu Val Arg His Pro
 50 55 60
 Asn Val Val Arg Leu His Glu Val Leu Ala Ser Arg Lys Lys Ile Phe
 65 70 75 80
 Ile Ile Leu Glu Phe Ile Thr Gly Gly Glu Leu Phe Asp Lys Ile Ile
 85 90 95
 Arg His Gly Arg Leu Ser Glu Ala Asp Ala Arg Arg Tyr Phe Gln Gln
 100 105 110
 Leu Ile Asp Gly Val Asp Phe Cys His Lys Lys Gly Val Tyr His Arg
 115 120 125
 Asp Leu Lys Pro
 130

<210> 25
 <211> 552
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (385)
 <223> n = A, C, G or T

<400> 25
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taatcaaaag ccaagacact gttcatacag ctgctcaatt atcaagccaa ccttgctcgg 120
ttccactgca gaatttcagt ttattcttat ctagctcaat tctggttggtg ggtttatctc 180
ttactggaag acagactttg aggtagactc cttataagtg cgcagaagtt caagtgtaga 240
gaatgagtca gcctaagatt aaacgccgag ttggtaaata cgaggtgggg aggaccattg 300
gtgaagggtac atttgcaaag gtgaaatttg caaggaactc tgagacagga gagccgtggc 360
tcttaaaatt cttgacaagg agaangtgct aaagcacaag atggctgagc agatcaggag 420
agaagtagct acaatgaaac taatcaagca tccaaatggt gttcgattgt atgaagtcac 480
gggaagcaag acaaatatat aatgttttgg agttgtactg ggggggaacc cttgcaaatt 540
gtaaccatgg aa 552

<210> 26
<211> 77
<212> PRT
<213> Glycine max

<220>
<221> UNSURE
<222> (39)
<223> Xaa = ANY AMINO ACID

<400> 26
Val Gly Lys Tyr Glu Val Gly Arg Thr Ile Gly Glu Gly Thr Phe Ala
1 5 10 15
Lys Val Lys Phe Ala Arg Asn Ser Glu Thr Gly Glu Pro Trp Leu Leu
20 25 30
Lys Phe Leu Thr Arg Arg Xaa Val Leu Lys His Lys Met Ala Glu Gln
35 40 45
Ile Arg Arg Glu Val Ala Thr Met Lys Leu Ile Lys His Pro Asn Val
50 55 60
Val Arg Leu Tyr Glu Val Met Gly Ser Lys Thr Asn Ile
65 70 75

<210> 27
<211> 391
<212> DNA
<213> Triticum aestivum

<220>
<221> unsure
<222> (179)
<223> n = A, C, G or T

<220>
<221> unsure
<222> (236)
<223> n = A, C, G or T

<220>
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<222> (240)
<223> n = A, C, G or T

<220>
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<222> (297)
<223> n = A, C, G or T

<220>
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<222> (316)
<223> n = A, C, G or T

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<222> (344)
<223> n = A, C, G or T

<220>
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<222> (357)
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<220>
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<222> (361)
<223> n = A, C, G or T

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<222> (371)
<223> n = A, C, G or T

<220>
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<222> (381)
<223> n = A, C, G or T

<220>
<221> unsure
<222> (386)
<223> n = A, C, G or T

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agatggagac aggcggcaaa gatggcaacc ctttgaagaa ttaccgtatt ggaagaccc 120
tggggattgg ttcgttcggg aaggtcaaga ttgcccagca tataaaaact ggtcacaang 180
tgcccgctcaa gatccttaac cgccggcaaa tcaaaaacat ggccgatggaa gagaangtgn 240

caagagagat caagatatta agattattca tgcacccaca tatcatccgc ctttatnaag 300
 tgatagaggc accagntgat atttatgtgg ntatgnanta tgtnaaagtc cggtganttg 360
 nttgattata ntgtttctaa ngctcntata t 391

<210> 28
 <211> 85
 <212> PRT
 <213> Triticum aestivum

<220>
 <221> UNSURE
 <222> (29)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (48)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (50)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (69)
 <223> Xaa = ANY AMINO ACID

<220>
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 <222> (75)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (80)
 <223> Xaa = ANY AMINO ACID

<220>
 <221> UNSURE
 <222> (82)
 <223> Xaa = ANY AMINO ACID

<400> 28
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 20 25 30
 Lys Ile Leu Asn Arg Arg Gln Ile Lys Asn Met Ala Met Glu Glu Xaa
 35 40 45
 Val Xaa Arg Glu Ile Lys Ile Leu Arg Leu Phe Met His Pro His Ile
 50 55 60
 Ile Arg Leu Tyr Xaa Val Ile Glu Ala Pro Xaa Asp Ile Tyr Val Xaa
 65 70 75 80

Met Xaa Tyr Val Lys
85